

AMENDMENTS TO THE SPECIFICATION

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ABSTRACT

A near-field scanning microwave microscope images the permittivity and dielectric tunability of bulk and thin film dielectric samples on a length scale of about 1 micron or less. The microscope is sensitive to the linear permittivity, as well as to non-linear dielectric terms, which can be measured as a function of an applied electric field. A versatile finite element model is used for the system, which allows quantitative results to be obtained. The technique is non-destructive and has broadband (0.1-50 GHz) capability.